International Journal of Community Medicine and Public Health
Atiyah FU et al. Int J Community Med Public Health. 2021 Oct;8(10):4767-4775
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20213651

Original Research Article

Analyzing of implementation maternal audit program in community health center: a qualitative study

Fityah U. Atiyah[1]*, Sri Sundari[1,2], Elsye M. Rosa[1]

[1]Master of Hospital Administration, Postgraduate Program, Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia
[2]Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia

Received: 18 August 2021
Revised: 29 August 2021
Accepted: 31 August 2021

***Correspondence:**
Fityah U Atiyah,
E-mail: fityah.ufi.pasca17@mail.umy.ac.id

ABSTRACT

Background: Maternal audits are part of quality control that is routinely carried out and aims as an essential learning material in evaluating maternal services in an area so that the expected outcome is a decrease in maternal mortality in an area. The maternal audit program that is carried out will undoubtedly benefit health facilities that provide services in the maternal sector, such as primary, secondary, and tertiary health facilities.
Methods: This study used a qualitative case study method with a purposive sampling technique. The data collection technique was carried out by interviewed using the in-depth interview method, and triangulation was carried out using observation and document review.
Results: The community health center has contributed to implementing maternal audits, starting from the data collection process, participating in district audit forums, and implementing the recommendations. Four factors influence the implementation of the maternal audit program at the community health center in reducing maternal mortality, namely the knowledge of health workers, the involvement of health workers in the community health center in the audit process, the recommendations for the results of the audit process and the implementation of follow-up on the results of the audit recommendations at the community health center.
Conclusions: The maternal audit program can reduce maternal mortality and improve the maternal and child service system at the community health center level, although there are still several obstacles in implementing the recommendations of the audit results.

Keywords: Maternal audit, Maternal mortality rate, Community health center

INTRODUCTION

In 2015, an estimated 303,000 maternal deaths occurred worldwide, with an average maternal mortality rate of 216 deaths per 100,000 live births. Almost all maternal deaths occur in developing countries with low to middle-income levels.[1] The causes of maternal death are caused by direct and indirect causes. Global data from 2003-2009 indicate that 73% of causes of death are caused by direct causes and 27% caused by indirect causes. Direct causes include bleeding (27.1%), with two-thirds of bleeding cases caused by postpartum hemorrhage, the second cause is hypertension (14%), followed by sepsis (10.7%), abortion (7.9%), and embolism (9.6%). Meanwhile, indirect causes are caused by pre-existing diseases and Human Immunodeficiency Virus (HIV). HIV is the cause of 5% of all maternal deaths globally.[2]

Indonesia is one of the developing countries with a high maternal mortality rate (MMR) and still requires attention from various parties to solve this problem. Data from the

Indonesian Demographic and Health Survey in 2012 showed the number of MMR was 359 per 100,000 live births. In 2015, The Intercensus Population Survey conducted data collection and found the number of MMR to be 305 per 100,000 births. From these data, it can be concluded that there is a decline in the MMR but has not reached the 2015 Millennium Development Goals (MDGs) target, which is 102 maternal deaths per 100,000 live births.[3] Postpartum hemorrhage and severe preeclampsia or eclampsia are the leading causes of near-miss cases and maternal death in Indonesia.[4,5]

Bantul Regency is one of the districts with a high MMR in the last five years compared to other districts in Yogyakarta Province. Maternal mortality data from 2015 to 2017 shows that the Bantul II Community Health Center and the Sewon II Community Health Center are two community health centers that often record death cases. The Bantul II Health Center recorded deaths in its working area in 2015 and 2017, while the Sewon II Health Center recorded deaths in its work area in 2016 and 2017.[6-8] That community health centers are close to Bantul General Hospital. Bantul General Hospital is the primary referral hospital for comprehensive emergency obstetric and neonatal care (PONEK) in Bantul Regency. In addition, the two community health centers are community health centers that do not have the status of basic emergency neonatal obstetric services (non-PONED) in Bantul Regency.

The maternal audit is part of quality control that is routinely carried out and aims as an essential learning material in evaluating services in the maternal sector.[9] The purpose of the maternal audit is to maintain and improve the quality of maternal-child health (MCH) services at the district or city, provincial and national levels.[10] In November 2014, The Indonesian Obstetrics and Gynecology Association conducted an audit of maternal deaths using 112 medical records and then divided the causes of maternal death into three major groups, including general condition, pre-hospital role, and hospital role.[11]

Several factors can be avoided to prevent maternal perinatal complications, divided into four major categories: factors oriented to health workers, patients, referral and transportation facilities, and administrative factors. Factors that are oriented to health workers affect about two-thirds of the factors that should be avoided to prevent complications in the maternal perinatal sector.[12]

The role of pre-hospital has contributed to maternal mortality. It was found that 32% of cases of delay in seeking help, 7% of cases of childbirth assisted by traditional birth attendants, 3% of cases of refusal to be referred, 31% of cases of delay in first-level health facility workers and independent practice in deciding to refer, and only 9% of health facility workers who perform pre-referral stabilization. This situation illustrates that the quality of pre-referral is still inadequate.[11]

This study aimed to analyze the implementation of the maternal audit program at the community health center level in reducing MMR. In this case, it was carried out at the Bantul II Community Health Center and Sewon II Community Health Center, whose work area was close to the main PONEK referral hospital but still recorded cases of death.

METHODS

The research method used in this study is a qualitative method with a case study design. This study began in October 2018 until February 2019. The research locations were Bantul II Community Health Center and Sewon II Community Health Center, Bantul Regency, Yogyakarta Province, Indonesia.

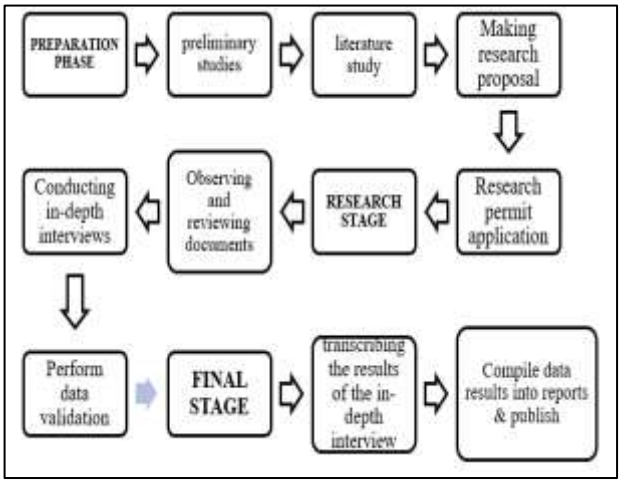

Figure 1: Steps of research.

The selection of research subjects was carried out by the purposive sampling method. A purposeful sampling method was used in the selection of participants in this qualitative study. The two groups who participated in this study were: (1) Midwife Coordinator: A midwife who is a leader of the maternal and child program in the community health center (2) Head of the community health center, who has leading the community health center which a minimum length of 3 years.

The data collection technique used are the observation, document-search, and interview method.

Observation

Researchers made observations by looking directly at the maternal audit process in the district. It will be hoped that researchers could have a deeper understanding and picture of the process. Researchers also observed how the follow-up of the recommendations and instructions from the health office was carried out at the community health center.

Document-search

The purpose of document tracking is to collect data on maternal mortality for maternal audits. The data are in the form of data on the number of maternal deaths, causes of maternal deaths, and file data for the maternal audit process in the district at the community health center.

Interview method

Interviews were conducted through in-depth interviews with participants. To make it easier for researchers to collect data through the interview process, the researchers will prepare a list of questions that will be asked whether the list of questions is by the existing problems and the objectives to be achieved by the researcher. Then the researcher will identify the participants to be interviewed, contact the participants to ask for their willingness to be interviewed and finally conduct interviews with the participants. Participants were explained about the purpose of the study, asked for their informed consent and permission to use digital recorders to create a record.

Data analysis begins with the analysis of document results from the review of forms and documents for maternal audit purposes. The document review will be used as a reference in analyzing the data from the interviews.

Data taken from the in-depth interview process will be made as a transcript of the interview results by playing back the recorded interview results, listening carefully, and writing down the words heard according to the recordings (verbatim transcription technique). The results of the interviews that have been copied into the transcript are in the form of raw data, which will then be read carefully by the researcher and then the data is reduced. Making data reduction by making abstractions that is taking and recording helpful information according to the research context and ignoring unnecessary words so as not to eliminate the essence of the core sentence. The abstractions that have been made in the form of units will be grouped based on the compatibility. Atlas. TI version 8 for macOS was used to help analyze the results of in-depth interviews.

Triangulation of sources, techniques, and research locations was carried out to maintain the validity of the data. Triangulation of sources in this study by conducting in-depth interviews with the head of the community health center as the leader of the community health center, technical triangulation by observing and checking data in the field and location triangulation was carried out by conducting research in two different community health center locations.

This research has obtained ethical approval from the health research committee of the faculty of medicine and health sciences, University of Muhammadiyah Yogyakarta.

RESULTS

The demographic characters were shown in Table 1. The mean age was 50.25±6.9 (range 40-55 years). Half of the participants graduate from the Diploma program and, the other graduate from the magister.

From the interviews, it was found that four main topics that influence the maternal audit program at the community health center in reducing MMR are the knowledge of health workers about auditing, the involvement of the community health center in the maternal audit process, the existence of learning sessions and follow-up to the maternal audit and the implementation of follow-up on the results of maternal audit recommendations.

Knowledge of health workers regarding maternal audit

The knowledge of maternal audit is essential because it will form how the health worker takes chronological tracking data as material for maternal audits at the district level. There are several important points related to knowledge about audits that are known to health workers. The participants have understood about maternal audits.

Table 1: The sociodemographic characteristics of participants.

Respondent (n=4)	Age (years)	Gender	Position	Last education	Length of Employment in Primary Health Services
1	54	Female	Coordinator midwife	3rd Midwife Diploma	30 years
2	52	Female	Coordinator midwife	4th Educator Midwife Diploma	33 years
3	40	Female	Head of community health center	Magister	16 years
4	55	Male	Head of community health center	Magister	30 years

"Maternal audits are tracking maternal deaths, then we start tracking it after we get a report from the hospital, then from a private practice midwife, then from cadres report, for example when there is a case of death at home. The death could be due to abortion, pregnancy outside the womb, death. During childbirth or the puerperium… We are only in accordance with our duties, so we are from the non-medical audit maternal format. Later, if the hospital is from the health office". (Participant 1).

"An audit carried out by the health office and the auditing maternal perinatal audit steps ..... The first course is to bring the assessment format, as later to assess the place of grief. By recording the location of the house, the village midwife or community health center midwife came to the family to do verbal maternal autopsy. Then if there is a health facility that acts as an intermediary before dying, we also provide a form for an intermediary maternal audit. But what was really given the format was the intermediary who was really the intermediary there, taking some kind of action that had something to do with what happened at the death". (Participant 2).

Table 2: Axial and coding of knowledge of health workers regarding maternal audit.

Category	Theme
Tracking of maternal death. **Criteria for audited cases.** **Tracing the chronology of causes.** **Using instruments** **Guidelines for filling out forms.** **Job description of the community health center team.** **Audit steps.** **The officer in charge of the audit.**	Knowledge of health workers regarding maternal audit

Involvement of community health center in maternal audit process

The involvement of health workers at the community health center in the maternal audit process is one of the essential factors in reducing maternal mortality. The involvement of the community health center personnel in the maternal audit process from the results of interviews includes involvement in audit data collection, involvement of various professions, involvement in maternal audit forums in districts. It makes health workers at the first facility-level feel enthusiastic and responsible for cases in their area. As the informant said:

"The process of auditing activities in the district, yes, health facilities that handle pregnant women will be invited. Later, there are usually several cases that are close in time will be collected into one……. Yes, later on, the health facilities involved in the service will be invited, the community health center will also be invited if it occurs in their working area or is registered in their working area." (Participant 1).

"When it comes to the community health center, it is usually me and the head of the community health center who come. The point is who comes depends on the invitation from the health office who is invited". (Participant 2)

"Well, what district is it from, is it not being able to present all the community health centers during AMP. So only those who were invited were invited, so in the end, The community health center that did not get the MMR or no MMR only got the final result, but we don't know the process. Though it may be important to us. Maybe there is a similar case but in our place there is no MMR, other places have MMR……But if I want the community health center to have a representative, what is the process." (Participant 3).

Table 3: Axial and coding of involvement of community health center in maternal audit process.

Category	Theme
Involved looking for data for an audit. **Involvement of various professions.** **Participation in maternal audit forums.** **The enthusiasm of the community health center to be involved in the audit forum.**	Involvement of community health center in maternal audit process

Learning session and audit follow up

In an audit forum conducted in the district, the final causes of death in maternal cases will be concluded. Then the cause of death will be classified as to whether it can be prevented or not. If maternal death is preventable, a recommendation will be given to the health facility if there is still a shortage in management. In this case, it can be a specific recommendation for a particular case. Then from the results of the maternal audit data, general recommendations will be given to other health facilities so that the same case does not occur and for instructions from the health office regarding service improvements to prevent maternal deaths in the future.

Table 4: Axial and coding of learning session and audit follow up.

Category	Theme
Specific learning sessions in districts. **General learning sessions in the district.** **Instructions from the health department.** **Submitting the results of feedback to the health care team.**	Learning session and audit follow up

"There is a meeting that is all the community health center. The meeting is called dissemination. It's cemented to doctors, to midwives, like that… If the dissemination results are the results of the maternal audit, the details of the maternal audit are not available to the community health center. For example, from all the cases from 2018, what was the result of the maternal audit, so briefly but not in detail. So how many of the 14 cases were bleeding?

What is the recommendation from the audit? That's all, what's the reason, this is the mother What is the risk of being pregnant, what is the cause of death, where did you die, what are the recommendations from the results of the maternal audit, that's all". (Participant 3).

".....delivered to all staff, via lokmin. However, for the MCH team and related parties, we also have a special meeting. Straight to the point. So there is a more detailed discussion there. The discussion in the workshop is only in general". (Participant 1).

Participants from first-level health facilities consider that the existence of these recommendations, both general, specific and instructions from the health office, is a reminder for them to be able to work according to standards and provide the best possible service to reduce MMR.

"Very useful, especially for the community health center, hospitals, or midwives, the practice itself is also beneficial. Because of that, I know what should be done. So at least it can change. At least, if there is a case like this, the response will be a change for the better". (Participant 2).

"From AMP, at least we can find out the cause of death. We can anticipate the cause of death, take preventive measures, and promote it if there is a similar case to what to do. That is what is important there. Another benefit is increasing awareness." (Participant 3).

Implementation of maternal audit follow-up

The follow-up implementation of the maternal audit recommendations and the instructions for the community health center from the health office related to the previous maternal audit results is one of the essential keys in improving MCH services in the community health center to reduce maternal mortality. However, in realizing these follow-up actions, two main factors determine whether or not the follow-up on the audit results is carried out.

The first factor is the accelerating factor, in the form of commitment of health workers at the community health center, the role of village cadres and village midwives, the community health center innovation, making SOPs as a guideline, the use of social media.

"Currently, we are improving on antenatalcare and data collection for pregnant women. We apply that all pregnant women are obliged to ANC at the community health center, then the initial screening is mandatory with the mother card. There it is complete, you must check the doctor, check the lab, check the teeth, nutritional consultation etc. So the hope is that early detection can be done. We also have a pregnancy list bag. So each village has data on which is the risk which is not?" (Participant 1).

Table 5: Axial and coding of implementation of maternal audit follow-up.

Category	Theme
Accelerating factors	
The role of health workers at the community health center. The role of village cadres and village midwife. The community Health Center Innovations. Making Standard Operational Procedure (SOP) as a guideline. Use of social media for communication	Implementation of maternal audit follow-up
Inhibiting factors	
Internal	
Lack of facilities and infrastructure. Financing. Lack of human resources at the community health center	
External	
Underestimates to the community health center Lack of information received	

"Innovation, namely the existence of a team to monitor the risks of childbirth, postpartum" Paman Bu Rini and Kuncoro "We deliberately created a discussion group like this. That is where the media for doctors, midwives and head of the community health center can even talk about those who died. With this group it becomes more intensive. In addition, there is also a WA group with a gasbinsu cadre whose name is parisKIA (high-risk pregnancy). Here is the schedule for home visits for pregnant women, posyandu schedules, cadres and village midwives who are responsible for it, everything is here. For those who are assisted are not only high-risk pregnant women, but all pregnant women, which are normal too. So we data everything. Pregnant women, postpartum mothers, where are the ANCs. We all know. The information was collected by the cadres who are involved in this parisKIA, later the information obtained from parisKIA will be transferred to the uncle of the burini, so that the flow is more organized. All data from cadres as the spearhead then goes to the community health center. ". (Participant 2).

"We also have a WA group that has been effective since 2016. There are a lot of our WA groups. There is a WA group with the MCH team, a WA group with doctors, a WA group with village midwives, with health cadres, even a WA group with pregnant women, postpartum women too, so if you want a discussion or also want to hold a pregnant women class it's easy" (Participant 1).

However, in its implementation, several inhibiting factors are felt by the community health center regarding the follow-up of the recommendations from the maternal

audit. Inhibiting of Implementation is divided into two: internal inhibiting factors that come from the community health center itself and external inhibiting factors that come from the community.

"One of them is the cost constraint. Yes, for example, we get instructions from the health office so that pregnant women are required to have an ECG. This is because it is motivated by the existence of several heart diseases that were not detected before. It just so happened that at that time the ECG was damaged at the community health center. We have tried to file. That is one of the limitations of the community health centes in terms of infrastructure and the costs for submitting new equipment cannot be immediately applied". (Participant 2).

"We are trying to make an integrated ANC. All pregnant women are obliged, but yes, it can't be 100% because there are many kinds of people, right? But we try to get 100% into the pregnancy list bag. Those who are already over economy don't want to go to the community health center. Even if she is at risk, she already has his own doctor …… If you look at the program, there are a lot of community health center now. So that we are actually only MCH, the eight midwives are more than enough. But we have another program that need MCH sources, like posyandu, pustu, etc" (Participant 1)"

"The reason I usually don't want to go to the community health center is that, first, maybe the mother works continuously, the second is underestimated with the community health center, then because of ignorance, I don't know that I have to go to the integrated ANC or I have to go to the community health center, then they don't know the actual facilities that don't exist. In another handling, for example, checking blood type, checking blood, checking blood types, then having to check teeth, seeing a general practitioner, meeting nutrition, they don't know. or they have no guarantee, and they don't want to keep queuing lazily, that's a classic reason" (Participant 3).

"The constraints on the infrastructure that I think are still lacking at this time. For example, the action room and the examination room are just one room, there is no difference. Yes, we will try to improve". (Participant 4).

DISCUSSION

Four factors influenced the implementation of the maternal audit program in reducing MMR: the knowledge of health workers about audits, the involvement of community health centers in maternal audits, the existence of learning sessions and follow-up audits, and the implementation of follow-up on maternal audit results.

Knowledge of health workers regarding maternal audit

The results of the research, both in-depth interviews and observations, showed that health workers, especially the main respondent, the midwife coordinator, had an understanding of maternal audit as a search for the cause of maternal death, besides that the respondent had been able to explain the criteria for the audited case, maternal audit steps, work domain community health center during the search, the format of the form used in the search as well as a description of the tasks of the community health center team in data collection.

Community health centers already have various forms needed to complete audits at the community health center level, such as verbal maternal autopsy forms and non-medical information, intermediary maternal medical records, and guidelines for filling out maternal verbal autopsy forms. All data are filled in by hand, referring to the guidelines for filling out maternal verbal autopsies issued by the Indonesian Ministry of Health in 2010.

The audit process and steps mentioned above are knowledge that must be possessed by health workers at various levels of service and also by leaders of health facilities and other parties involved in the maternal audit process. Knowledge of maternal audit is assessed from being able to explain the definition of audit, namely evaluation of services, follow-up, assessment, problem analysis, finding out the cause. Besides being able to explain the purpose of the audit, namely being able to manage cases, avoid the same mistakes, learn things, provide feedback and recommendations and improve services.[9]

Involvement of community health center in maternal audit process

The results showed that the community health center was involved in the maternal audit process at the input stage, in this case, the data collection. Even though the case of death occurred in the hospital, if the death occurred in the work area of the community health center, the community health center is responsible for finding the chronological cause of death in the form of a maternal verbal autopsy in the community. This is in line with the 2010 maternal audit and care guidelines.

The verbal maternal autopsy form is filled out every time there is a reported maternal death at the district level. Filling in is done by the Coordinator Midwife/Midwife appointed from the community health center where the deceased case is domiciled. This form is used for verbal autopsy purposes for maternal deaths occurring in the community. In addition, this form is also used to obtain non-medical information about maternal deaths, both for maternal deaths in the community and health facilities.[10]

Verbal autopsy is a method to find out the cause of death both medically and non-medically by asking the family and the community. This technique is commonly used to explore cases of deaths that occur outside health facilities. In addition, this technique can also be used to identify factors that cause death in health facilities.[13,14]

The 2010 maternal perinatal audit guidelines (AMP) have the same cycle in carrying out the maternal audit process, starting from identifying cases of death and reporting death data, which includes maternal deaths including cases of female deaths related to pregnancy (including ectopic pregnancy), childbirth, abortion (including molar abortion) and up to 42 days after the termination of pregnancy regardless of gestational age and excluding cases due to accidents or unexpected events.[10]

After identifying the case and reporting it, the data that has been obtained will be sent to the AMP secretariat for registration and anonymization by providing a case code number and eliminating all identities of patients, health care providers and related health institutions.[10]

After the case has been registered and anonymized, the case is selected and the study schedule is scheduled. After obtaining the right schedule, a case study meeting will be held. During the meeting, a death analysis will be carried out. During the analysis, it will be discussed whether these deaths can be prevented or not. If the case can be prevented, it is necessary to specify what factors can be prevented both from a medical and non-medical perspective. After that, the cause of death was classified and recommendations were made. The final step is to use the results of the study in the form of learning, both individual learning and focus group learning.[10]

Case review meetings were held without inviting health workers or service facility representatives involved in providing case services. The presentation of cases by the officers involved is no longer allowed, instead, death data is represented by a form that has been filled out as completely as possible.[10]

The results of interviews using the in-dept interview method to the two main participants as well as a preliminary study in Bantul Regency, there were slight differences in the audit implementation process with the 2010 AMP guidelines, namely when a case study meeting was held. Health facilities involved in services and health facilities that have areas will be invited but will not make a case presentation directly because they have filled out the form completely. So that when conducting the audit, the officer listens to the results of the review from the review team that has been previously anonymized, conducts discussions and obtains recommendations if there are any. However, there are differences from the audit process carried out, the community health center remains enthusiastic to participate in the audit process, because by participating directly in the audit forum, participants feel that this is one way to find out more clearly the causes and chronology of maternal deaths in their work area and get recommendations directly so that they are not expected to do the same thing in the future. The audit forum conducted in the district still adheres to the principles of maternal audit, namely no name, no shame, no blame, no pro juscticia, and learning.

Learning session and audit follow up

Learning sessions and follow-up audits are one of a series of audit activities carried out. In the 2010 maternal audit guidelines, the learning sessions are divided into three groups:

The first group is a group of health workers and institutions that are directly involved in the service of the case being studied. This group needs feedback on cases related to the services it provides. The learning sessions for these groups are called individual learning sessions.[10]

The second group is the service community that is not involved (either directly or indirectly) in the service of the case being studied. They need to learn from the experiences of others in order to improve the quality of their role in maternal/perinatal/neonatal services. The material and manner in which the learning sessions are delivered for the service community vary according to the needs of these groups. Because of the specific nature of their learning needs, they are called focus group learning sessions.[10]

The third group is a group whose learning needs are general. This group comes from all components of the service community so that it is mass. Learning sessions for these groups are called mass learning sessions.[10]

From the results of research conducted at the community health center and the results of preliminary studies, there are modifications of the learning process carried out in a series of maternal audit activities in the district. This is adjusted to the circumstances and conditions that occur in the area.

Implementation of maternal audit follow-up

There are several strategies that can be used to improve the quality of maternal and perinatal services in low- and middle-income countries, including audits, feedback and guidelines, integrated management of childhood diseases, training of health workers, and financial support. The audit-feedback-guideline cycle occupies the highest positive outcome with 78.6%, followed by financial support with a positive outcome of 66.7%, training of health workers with 57.1% and integrated management of childhood diseases with a positive outcome of 33.3%. From these data it can be concluded that audits have a good role in improving the quality of maternal and perinatal services.[15]

The maternal audit process will produce the effects and outcomes of these activities. Outcomes obtained by parties related to maternal services are very important. Audits have an effect related to the obstetric services provided, both for individuals when acting as health workers.[16]

Improving service quality is one of the objectives of the audit. Good quality is determined by health system

policies, ability to provide services, motivation and competence of staff and acceptance of health services by the community.[15]

The results showed two main factors that influenced the implementation of follow-up on audit results, namely the improving and inhibiting factors for accelerating audit follow-up. The accelerating factors include the role of health workers in the community health center, the role of cadres and village midwives in improving MCH service programs, innovations in health centers to improve MCH services, making SOPs as guidelines, using social media as a means of communication to improve MCH services. The inhibiting factors for the success of audit management are divided into two, namely internal factors that come from the community health center itself and external factors that come from outside the community health center, in this case the community. Internal factors are lack of facilities and infrastructure, funding, lack of human resources in community health centers, while external factors are underestimated of community health centers, lack of information received, and no free time to go to community health centers.

These results are in accordance with previous research conducted in Bantul Regency, namely the evaluation of maternal mortality in Bantul Regency with a case study design, namely that there are still problems in the first-level facilities, namely: limited physical infrastructure and human resources, less than optimal stabilization of pre-referral and communication between the referrer and staff health services in referral hospitals and the lack of maximum utilization of antenatal care (ANC) services in first-level health facilities.[17]

In addition, the low quality of care in maternal perinatal health facilities is one of the main factors that can increase mortality and morbidity. Most women who see poor care in a health facility choose to avoid the facility, even though if the woman wants to come to the facility, there is still hope for an intervention that can save her life when an emergency occurs.[18]

The success of a maternal audit process on the response and monitoring of maternal deaths is supported by several factors including political support, financial support, firm commitment and having a culture of "no shame" and "no blame" in its implementation.[19]

Researchers assess the success of the maternal audit program at the community health center, namely from the maternal mortality rate that occurred at the community health center in the following years. Researchers used data from the Bantul District Health Profile from 2019 and 2020 to see the number of MMR that occurred in 2018 and 2019. From this data, it was found that there was no MMR in 2018 and 2019 at the Bantul II Community Health Center, while at the Sewon II Community Health Center in 2018 there were no cases of death. However, in 2019 there was one case of maternal death caused by previously known comorbidities. From these data, it can be concluded that a maternal audit can reduce the maternal mortality rates at the Bantul II Community Health Center and Sewon II Community Health Center.

This study has several limitations, including only being conducted at two research sites, so that it does not describe the circumstances of the implementation of the maternal audit program in all community health centers in Bantul Regency. The researcher suggests that subsequent research be carried out with focus group discussions with all parties related to the maternal audit process at the community health center level, starting from village cadres, village midwives, community health center midwives, midwives coordinator, doctors, and heads of community health centers as facility leaders, and representatives from the health department.

CONCLUSION

The maternal audit program is able to reduce maternal mortality and improve the quality of services at community health centers, although there are still several obstacles in implementing the recommendations of the audit results. The factors that influence the success of the maternal audit program are the knowledge of the health workers related to the maternal audit, the participation of health workers in the community health center during the audit process, the recommendations for the results of the audit process, and the implementation of follow-up on the results of the audit recommendations. The difference in the system of procedures for the maternal audit process is still adjusting to the existing conditions in each region without leaving the principles of the maternal audit process.

ACKNOWLEDGEMENTS

The authors would like to thank the Research Team and Postgraduate Study Programs at the University of Muhammadiyah Yogyakarta, as well as all parties from the Bantul District Health Office, Bantul II Community Health Center and Sewon II Community Health Center who have assisted in the implementation of this research.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. World Health Organization, UNICEF, United Nations, Department of Economic and Social Affairs, Population Division, World Bank. Trends in Maternal Mortality: 1990 to 2015 : Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division.; 2015. http://www.who.int/reproductivehealth/publications/monitoring/maternal-mortality-2015/en/. Accessed on 12th January, 2018.

2. Say L, Chou D, Gemmill A. Global causes of maternal death: a WHO systematic analysis. Lancet Glob Health. 2014;2(6):e323-33.
3. Indonesia KK. Profil kesehatan Indonesia tahun 2011: 2015.
4. Adisasmita A, Smith CV, El-Mohandes AAE. Maternal Characteristics and Clinical Diagnoses Influence Obstetrical Outcomes in Indonesia. Matern Child Health J. 2015;19(7):1624-33.
5. Reinebrant H, Leisher S, Coory M. Making stillbirths visible: a systematic review of globally reported causes of stillbirth. BJOG Int J Obstet Gynaecol. 2018;125(2):212-24.
6. Bantul D. Profil Kesehatan Kabupaten Bantul 2015. Kabupaten Bantul. 2015;47.
7. Bantul D. Profil Kesehatan Kabupaten Bantul. 2016;2016.
8. Bantul D. Profil Kesehatan Kabupaten Bantul 2017. Kabupaten Bantul. 2017;50.
9. Bakker W. Health workers' perceptions of obstetric critical incident audit in Thyolo District, Malawi. 2011.
10. Depkes RI. Pedoman Audit Maternal Perinatal (AMP). Departemen Kesehatan RI. 2010.
11. Saleh. Audit Kematian Ibu Di Indonesia. 2014.
12. Daly MJ, Gaidamakova EK, Matrosova VY. This is an open-access article distributed under the terms of the Cre. 2010.
13. Mathur A, Awin N, Adisasmita A. Maternal death review in selected countries of South East Asia Region. BJOG Int J Obstet Gynaecol. 2014;121:67-70.
14. Lewis G. Beyond the Numbers: reviewing maternal deaths and complications to make pregnancy safer. Br Med Bull. 2003;67(1):27-37.
15. Dettrick Z, Firth S, Jimenez Soto E. Do Strategies to Improve Quality of Maternal and Child Health Care in Lower and Middle Income Countries Lead to Improved Outcomes? A Review of the Evidence. Myer L, ed. PLoS ONE. 2013;8(12):e83070.
16. Graham W, Wagaarachchi P, Penney G, McCaw-Binns A, Antwi KY, Hall MH. Criteria for clinical audit of the quality of hospital-based obstetric care in developing countries. Reprod Health. 2000;7.
17. Dewi A, Bekti NK, Masters Program in Hospital Management, Universitas Muhammadiyah Yogyakarta, Supriyatiningsih S, Department of Obstetrics and Gynecology, Faculty of Medicine and Health Science, Universitas Muhammadiyah Yogyakarta. Maternal Mortality Evaluation: A Case Study in Bantul, Yogyakarta. J Matern Child Health. 2019;4(5):332-40.
18. Austin A, Langer A, Salam RA, Lassi ZS, Das JK, Bhutta ZA. Approaches to improve the quality of maternal and newborn health care: an overview of the evidence. Reprod Health. 2014;11(2):S1.
19. Tura AK, Fage SG, Ibrahim AM. Beyond No Blame: Practical Challenges of Conducting Maternal and Perinatal Death Reviews in Eastern Ethiopia. Glob Health Sci Pract. 2020;8(2):150-4.

Cite this article as: Atiyah FU, Sundari S, Rosa EM. Analyzing of implementation maternal audit program in community health center: a qualitative study. Int J Community Med Public Health 2021;8:4767-75.